

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ROLAND STRAHLE

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Appeal No. 98-1554  
Application No. 08/586,894<sup>1</sup>

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ON BRIEF

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Before ABRAMS, STAAB, and CRAWFORD, *Administrative Patent Judges*.

ABRAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 16-19, 22-24, 26-37 and 39-41, which

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<sup>1</sup> Application for patent filed January 22, 1996.

constitute all of the claims remaining of record in the application.

The appellant's invention is directed to a heat accumulator.

The subject matter before us on appeal is illustrated by reference to claim 16, which reads as follows:

16. A heat accumulator, comprising an interior envelope containing an accumulator core; an exterior envelope surrounding said interior envelope at distance therefrom so as to form an insulating chamber; two lines extending through said insulating chamber and including an inflow line and an outflow line for a heat conveying medium, each of said lines having a line section extending in said insulating chamber, said line sections being formed of a metal having low heat conducting capability.

#### THE REFERENCES

The references relied upon by the examiner to support the final rejection are:

Lucke	2,447,259	Aug. 17, 1948
Bottum et al. (Bottum)	3,344,506	Oct. 3, 1967
Schatz	5,090,474	Feb. 25, 1992

Flinn et al., "Engineering Materials", 1975., pages 158-161.

**THE REJECTIONS**<sup>2</sup>

Claims 16-19 and 39 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schatz in view of Engineering Materials.

Claims 22-24, 26-37, 40 and 41 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schatz in view of Lucke and Bottum.

The rejections are explained in the Examiner's Answer.

The opposing viewpoints of the appellant are set forth in the Brief.

**OPINION**

After consideration of the positions and arguments set forth by both the examiner and the appellant, we have concluded that the teachings of the references relied upon fail to establish a *prima facie* case of obviousness with respect to the claimed subject matter. This being the case, we will not

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<sup>2</sup> A number of claims were amended after the final rejection, which overcame rejections under 35 U.S.C. § 112, second paragraph. See Papers Nos. 10, 11, 15 and 16.

sustain either of the rejections. Our reasons for this decision follow.

Both of the rejections are on the basis of obviousness under 35 U.S.C. § 103, for which the test is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clapp*, 227 USPQ 972, 973 (BPAI 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1052 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

According to the appellant, the connection lines to heat accumulators which pass through the insulation chamber between the exterior and interior walls have been made of plastic in the prior art, because the heat conductivity of plastic is less than that of metal (specification, page 1). However, the appellant continues, plastic lines suffer from problems, including an inability to withstand mechanical stresses and to be sealed properly with the metal walls through which they pass. The appellant's invention solves these problems by utilizing for the connection lines a metallic material that has a low heat-conducting capability, such as "rust- and acid-resistant chromium-nickel alloy steel," which can withstand the stresses and is easily sealed to the walls, while still considerably reducing heat losses (specification, pages 2 and 5). As manifested in independent claims 16, 40 and 41, the invention requires, *inter alia*, that the lines be formed "of a metal having low heat conducting capability."

*The Rejection On The Basis of Schatz  
And Engineering Materials*

Claim 16 has been rejected as being unpatentable over the combined teachings of Schatz and Engineering Materials. It is the examiner's position that Schatz discloses all of the claimed subject matter except for the teaching of forming the lines of a metal having low heat conducting capability, but that this is taught by Engineering Materials, and it would have been obvious to one of ordinary skill in the art to form the lines of Schatz of the claimed metal rather than the disclosed plastic. The appellant argues that the applied references would not have suggested this to the artisan, for several reasons. We agree.

Schatz discloses forming the inlet and outlet lines of plastic, which gives rise to the precise problems which the appellant seeks to overcome. Engineering Materials discloses on page 160, in a table entitled "TYPICAL PROPERTIES OF NICKEL ALLOYS," ten nickel alloys, including Inconel 600. The examiner states that this reference establishes Inconel 600 "as exhibiting . . . low thermal conductivity" (Answer, page 5). As did the appellant, we take issue with this conclusion. Nowhere in this reference do we find even the mention of the thermal conductivity of this or the other nickel alloys, much

less a teaching that Inconel 600 exhibits the property of low heat conducting capability, which is required by claim 16.

The mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). We fail to perceive any teaching, suggestion or incentive in either Schatz or Engineering Materials which would have led one of ordinary skill in the art to form the lines of Schatz of a metal having a low heat conducting capability rather than of plastic, as disclosed by Schatz, other than the hindsight acquired by one who first viewed the appellant's disclosure. This, of course, is not a proper basis for a rejection under Section 103. See *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

The teachings of the two applied references therefore fail to establish a *prima facie* case of obviousness with regard to the subject matter of independent claim 16 or, it follows, of the claims dependent therefrom.

*The Rejection On The Basis Of  
Schatz, Lucke and Bottum*

Independent claims 40 and 41 stand rejected as being unpatentable over Schatz in view of Lucke and Bottum. The examiner begins with the proposition that

Schatz ('474) discloses all the claimed features of the invention with the exception of the line section being provided with an aluminum connecting sleeve in an area adjoining the interior envelope and in an area leading out of the exterior envelope (Answer, pages 5-6).

He goes on to look to Lucke for a teaching of using sleeves bonded to lines where they go through interior casing walls and Bottum for a teaching of doing the same with aluminum sleeves where the lines go through external casing walls, concluding that it would have been obvious to add these features to the Schatz structure.

This rejection is fatally defective on its face, in that both claims require lines formed of "a metal having low heat conducting capability," which is not found in Schatz, as the examiner admitted in the rejection of claim 16, and which also



appears not to exist in either of the newly applied references. This being the case, even assuming, *arguendo*, that the secondary references teach what the examiner says they teach and are properly combinable with Schatz, the teachings of the three references fail to establish a *prima facie* case of obviousness with regard to the subject matter of claims 40 and 41. Moreover, we note in passing that this defect would not be cured by adding Engineering Materials to this combination in view of the deficiencies in that reference pointed out above *viz a viz* the matter of teaching low heat conducting capability.

This analysis also applies to the rejection on these same grounds of claims 22-24 and 26-37, all of which depend from claim 16.

**SUMMARY**

Neither rejection is sustained.

The decision of the examiner is reversed.

**REVERSED**

NEAL E. ABRAMS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
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	)	
MURRIEL E. CRAWFORD	)	
Administrative Patent Judge	)	

NEA/jlb

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Striker Striker & Stenby  
360 Lexington Avenue  
New York, NY 10017

